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Brief Biography

Dr. Falah Mohammed received his Ph.D. degree in Electrical and Computer engineering from Queen's University, Belfast UK (2004), and B.S.E.E. degree from An Najah national university, Palestine (1997). Falah worked at the Arab American University, Palestine since 2005-2008 as an assistant professor in the department of telecommunication. He moved then to An Najah national university, Palestine and worked as an assistant professor in the department of electrical and electronic engineering. In October 2009-august 2010, Falah was a Fulbright visiting scholar at the electrical and computer department at the University of Alabama.

Research interests

My research interests are in nanowires and their application for future interconnects, multitone signals and their application for fault diagnosis, high frequency circuits, RF and microwave circuits. Dr. Mohammed is a member of IEEE.

Teaching Interests

My teaching interests are in the field of communication, RF and microwave circuit design. Some of the courses taught in this field are

- Electromagnetics II
- Microwave engineering
- Electronics of communications
- Circuits I and II
- Electronics I and Electronics II
- Analogue and digital communications
- Signals and systems
- Digital signal processing

Education

- 2000-2004 Ph. D; School of Electrical and Electronic Engineering Queen's University of Belfast; Belfast, UK; Thesis title, "High Data Pulse Compression Using Non-Linear transmission Line"
- July 1997 BSEE (1st class honours); School of Electrical and Electronic Engineering; An-Najah National University, Palestine.

Projects

1. PhD project "High Data Rate Pulse Compression using Non-Linear Transmission Line (NLTL) Technology".

In this project I design a MMIC NLTL used to compensate for the dispersion effect in printed circuit board traces. The NLTL worked very similar to blind equalizer

2. Final year project "Microcontroller based irrigation system" This project include the following activities.

In this project I designed I designed a computerized irrigation system. The system was implemented using 8751 microcontroller

Employment history

1. **Fulbright visiting scholar:** Sept. 2009 – July 2010, Department of electrical and computer engineering, University of Alabama. During this year I was a visiting scholar at the department of electrical and computer engineering where I conducted a research in the field of RF testing and carbon nano tube modelling. The outcome of my research was publishing a journal paper and two refereed conferences. My joint research with the UA personnel also leads to the development of novel test technique that is patented by Texas Instrument personnel.
2. **Assistant Professor:** Sept. 2008 – present , School of Electrical and Electronic Engineering, An-Najah National University the post includes teaching and final year project supervision activities. Some of the taught courses are
3. **Assistant professor:** Feb. 2005 – Sept. 2008, Faculty of Information Technology, Arab American University, Jenin (the post includes several teaching and final year project supervision activities)
4. **Engineer:** 1998-2000; Heliopolis Electric; Dubai; UAE (the duties of this post were)
 - Project management, planning and supervision
 - Co-ordinator between the consultant and contractor

Skills

Measurement equipments:

- Oscilloscopes, spectrum analysers, multimemeters
- Agilent 8510B and 8510C VNAs: used to perform s-parameter measurements
- Agilent 70820 MTA: used to perform large signal measurements
- Cascade Microtech 12000 probe station: used to perform on wafer measurements

CAD tools and programming:

- Agilent ADS
- Ansoft HFSS
- C/C++
- MATLAB
- HiTechPro for PIC microcontroller family

Patents

- 1) Bruce Kim, Anurag Gupta, Sukeshwar Kannan, Falah Mohammed, Byoungchul Ahn, "Method and model of carbon nanotube based through silicon vias (tsv) for rf applications," US Patent 20,120,306,096 A1 30 May 2011

Selected Publications

- [1] F. Mohmmed (supervisor) H. W. Marie , J. M. Hassoun , H. I. Shamasneh and S. H. Salawdeh, "Pipe and Cable locator Robot," Second Arab Innovation Network, Jordan December 5-7 2013 (Best paper award)
- [2] Sukeshwar Kannan, Bruce Kim, Ganesh Srinivasan, Friedrich Taenzlar, Richard Antley, Craig Force, Falah Mohammed, "RADPro: Automatic RF Analyzer and Diagnostic Program Generation Tool," IEEE International Test Conference (ITC), 2010 Digital Object Identifier: 0.1109/TEST.2010.5699233.
- [3] Sukeshwar Kannan, Anurag Gupta, Bruce C. Kim, Falah Mohammed Byoungchul Ahn, "Analysis of Carbon Nanotube Based Through Silicon Vias," Electronic Component Technology Conference, Las Vegas, 1-4 June, 2010, pp. 51-57, ISSN 0569-5503, Digital Object Identifier: 10.1109/ECTC.2010.5490885.
- [4] Bruce C. Kim, Sukeshwar Kannan, Anurag Gupta, Falah Mohammed Byoungchul Ahn, "Development of Carbon Nanotube Based Through-Silicon Vias," J. Nanotechnology Eng. Med., May 2010, Volume 1, Issue 2, 021012,
- [5] M. Falah, D. Linton, "High data rate pulse regeneration using Non-Linear Transmission Line technology (NLTL)," 6th IEEE High Frequency Postgraduate Student Colloquium, September 2001, pp. 136-141.
- [6] M. Falah, D. Linton, J. Williamson, "Design of Schottky diode using SilvacoTM," 7th IEEE High Frequency Postgraduate Student Colloquium, September 2002, Imperial Hotel London, ISBN0-7803-7618-8, pp. 29-35.
- [7] M. Falah. D. Linton, J. Williamson, "Non-linear Transmission line (NLTL) for pulse compression and improvement of the eye diagram in 2.5 Gbits communication systems," Postgraduate Research Conference in Electronics, Photonics, Communications and Software, April 2003, pp. 101-102.
- [8] M. Falah. D. Linton, J. Williamson, "Bandwidth improvement using Pulse compression within an electro optic system for high bit rate telecommunications," The first GCC Industrial Electrical & Electronics Conference, may 2003.
- [9] M. Falah, D. Linton, J. Williamson, F. Ruddell and H. Gamble, "Application of the Non-Linear Transmission line (NLTL) to Telecommunications Dispersion Correction," Irish signal and system conference (ISSC2003), July 2003, pp. 554-559.
- [10] M. Falah, D. Linton, J. Williamson, F. Ruddell and H. Gamble, "Pulse compression using distributed and periodically loaded non-linear transmission lines," National URSI symposium, July 2003, pp. D4.

- [11] M. Falah, D. Linton, J. Williamson, F. Ruddell and H. Gamble, "Pulse compression using Non-Linear Transmission (NLTL) Lines based on Schottky Quantum Barrier Varactor diodes," 8th IEEE High Frequency Postgraduate Student Colloquium, September 2003, Queen's University Belfast, pp. 120-123.
- [12] M. Falah and D.Linton, "Characterisation of Schottky Varactor Diodes for Pulse Compression Circuits," Irish Signal and System Conference (ISSC2004), July 2004, pp. 691-695.
- [13] M. Falah, D. Linton, J. Williamson, F. Ruddell and H. Gamble, "Silicon Non-Linear Transmission Line Pulse Compressor," Asia Pacific Microwave Conference, December 2004.
- [14] M. Falah, D. Linton, J. Williamson, F. Ruddell and H. Gamble, "A Novel Silicon Schottky diode for Non-Linear Transmission Line (NLTL) applications," IEEE Transactions in Electron Devices Special Edition, Vol. 52, No. 7, July 2005, pp. 1384-1391.

Referees

References are available upon request